

## ABSTRACT

This invention addresses methods and compositions for providing alkyl diphenyl oxide sulfonic acid blends at useful viscosities for use in surfactants such as DOWFAX - containing surfactants. The low viscosity alkyl diphenyl oxide sulfonic acid blend is made by admixing a fatty acid having a carboxylic chain length between 1 and 12 (e.g., formic acid, acetic acid, propionic acid, butanoic acid, pentanoic acid, valeric acid, hexanoic acid, heptanoic acid, octanoic acid, nonanoic acid, decanoic acid, undecanoic acid, or dodecanoic acid into an alkyl diphenyl oxide sulfonic acid reaction product to provide between about 5 weight percentage and about 50 weight percentage of fatty acid in the admixture.